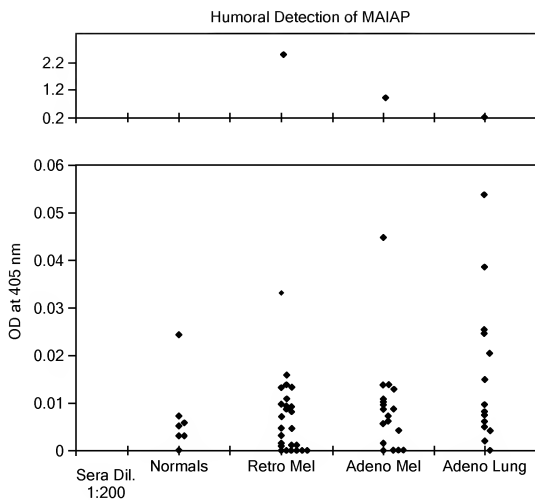
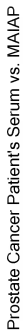
**FIG. 1**

**FIG. 2**



**FIG. 3**

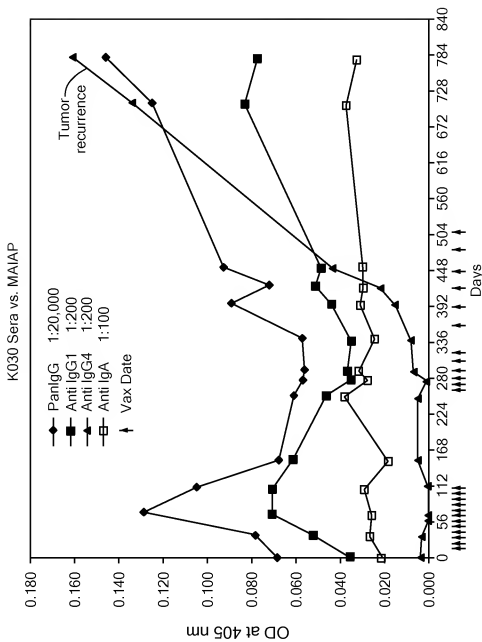
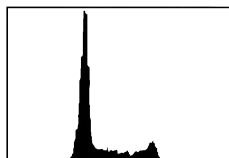
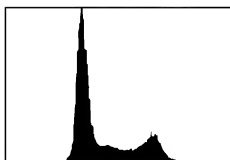


FIG. 4

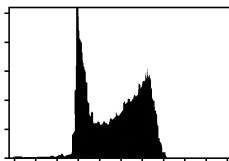
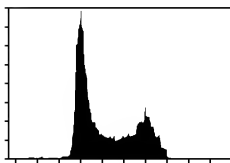
# Cell Cycle Analysis

293 WT Cells

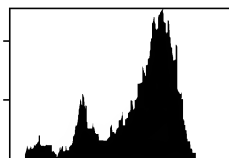
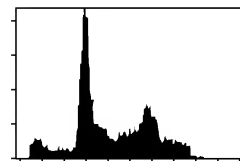
293 MAIAP Transfected Cells



1 hr. after irradiation



24 hrs. after irradiation



48 hrs. after irradiation

***FIG. 5***

ATGACAGGGTCCAGAACTGGCGAGCCACGAGGGACATGTGTAGGTATCG  
 GCACAACTATCCGGATCTGGTGGAAACGAGACTGCAATGGGGACACGCCAA  
 ACCTGAGTTTCTACAGAAATGAGATCCGCTTCTGCCCAACGGCTGTTTC  
 ATTGAGGACATTCTCAGAACTGGACGGACAACTATGACCTCCTTGAGGA  
 CAATCACTCTACATCCAGTGGCTGTTTCTCTGCGAGAACCAGGAGTGA  
 ACTGGCATGCCAAGCCCCCTCACGCTCAGGGAGGTCGAGGTGTTTAAAGC  
 TCCAGGAGATCCAGGAGCGGCTTGTCGGGGCTACGAGCTCATGCTGGG  
 CTTCTACGGGATCCGGCTGGAGGACCGAGGCACGGGCACGGTGGGCCGAG  
 CACAGAACTACCAGAAGCGCTTCCAGAACTGAACTGGCGCAGCCACAAC  
 AACCTCCGATCACACGCATCCTCAAGTCGCTGGTGAGCTGGGCCTCGA  
 GCACTTCAGGCGCCGCTGGTCCGCTTCTCTGGAGGAGACGCTGGTGC  
 GGGGGAGCTGCCGGGGGTGCGGCAGAGTGCCCTGGACTACTTCATGTTT  
 GCCGTGCGCTGCCGACACCAGCGCCGCCAGCTGGTGCACTTCGCTGGGA  
 GCACTTCGGCCCCGCTGCAAGTTCGTCTGGGGGCCCCAAGACAAGCTGC  
 GGAGGTTCAAGCCCAGCTCTCTGCCCATCCGCTCGAGGGCTCCAGGAAG  
 GTGGAGGAGGAAGGAAGCCCCGGGGACCCGACCACGAGGCCAGCACCA  
 GGGTCGGACCTGTGGGCCAGAGCATAGCAAGGGTGGGGGACGGGTGGACG  
 AGGGGCCCCAGCCACGGAGCGTGAGAGCCCCAGGATGCGGGACCCCTGGAG  
 AGGAGCCAGGGGATGAGGCAGGGGGCCACGGGGAAGATAGGCCGGAGCC  
 CTTAAGCCCCAAAGAGAGCAAGAAGAGGAAGCTGGAGCTGAGCCGGCGGG  
 AGCAGCCGCCACAGAGCCAGGCCCTCAGAGTGCTCAGAGGTGGAGAAG  
 ATCGCTCTGAATTTGGAGGGGTGTGCCCTCAGCCAGGGCAGCCTCAGGAC  
 GGGGACCCAGGAAGTGGGCGGTGAGGACCTGGGGAGGCAGTGACGCCCT  
 GCCGCCAACCCCTGGGAGCCAGGGTGGCCGACAAGGTGAGGAAGCGGAGG  
 AAGGTGGATGAGGGTGCTGGGGACAGTGCTGCGGTGGCCAGTGGTGGTGC  
 CCAGACCTTTGGCCCTTGCCGGGTCCCCTGCCCATCGGGGCACCCCAAGG  
 CTGGACACAGTGAGAACGGGGTTGAGGAGGACACAGAAGTGCACCGGG  
 CCCAAGAAGGTACCCCTGGGAGCCCATCGGAGACCCAGGCCCCCGCCC  
 AGCAGGACCTGCAGGGGACGAGCCAGCCGAGAGCCCATCGGAGACCCAG  
 GCCCAGCCCGGACGACCTACAAGGGATGAGCCAGCCGAGAGCCCATCG  
 GAGACCCAGGCCCCCGCCGGCAGGACCTGCAGGGGACGAGCCAGCCGA  
 GAGCCCATCGGAGACCCAGGCCCCCGCCGGCAGGACCTGCAGGGGACG  
 AGCCAGCCGAGAGCCCATCGGAGACCCAGGCCCCAGCCCGGACGACCT  
 ACAAGGGATGAGCCAGCCAAGGCGGGGGAGGCAGCAGAGTTGCAGGACGC  
 AGAGGTGGAGTCTTCTGCCAAGTCTGGGAAGCCTTAA

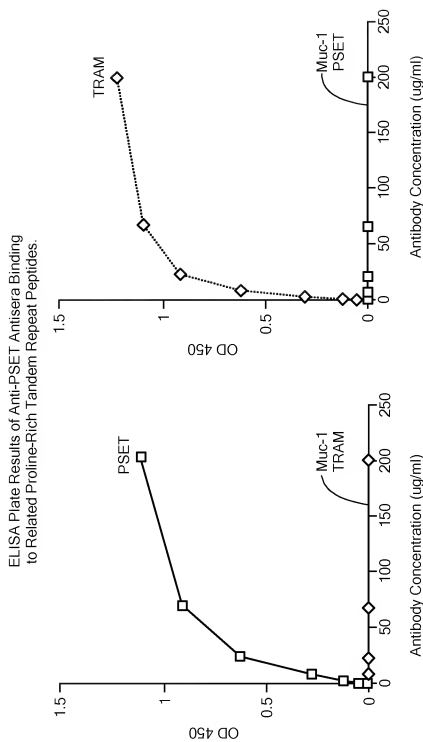
***FIG. 6***

MTGSRNWRATRDMCRYRHKYPDLVERDCNGDTPNLSFYRNEIRFLPNGCFIEDIL  
 QNWTDNYDLLEDNHSYIQWLFPLREPGVNWHAKEPLTLREVEVFKSSQEIQERLV  
 RAYELMLGFGYRILEDRGTGTVGRAQNYQKRFFQNLNWRSHNNLRITRILKSLGEL  
 GLEHFQAPLVRFFLEETLVRRELPGVRQSALDYFMFAVRCRHQRRQLVHFAWEH  
 FRPRCKFVWGPQDKLRRFKPSSLPHPLEGSRKVEEEGSPGDDPDHEASTQGRTCGPE  
 HSKGGGRVDEGPQPRSEPEQDAGPLERSQGDEAGGHGEDRPEPLSPKESKKRKLLEL  
 SRREQPPTEPGPQSASEVEKIALNLEGALSQGSRLRTGTQEVGGQDPGEAVQPCRQP  
 LGARVADKVRKRRKVDEGAGDSAASVAGGAQTLALAGSPAPSGHPKAGHSEN  
 GVEEDTEGRTGPKEGTPGSPSETPGPRPAGPAGDEPAESPSETPGSPAGPTRDEPAE  
 SPSETPGPRPAGPAGDEPAESPSETPGPRPAGPAGDEPAESPSETPGSPAGPTRDEPAE  
 AKAGEAAELQDAEVSSAKSGKP

## ***FIG. 7***

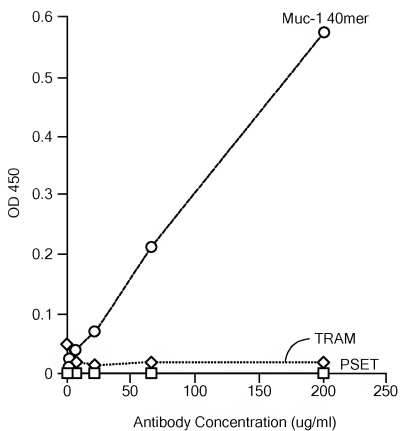
MRLGTVLRWVWVPRPWPLPGPLPHRGTPRLDVTGLRRTQKVERGPKKVPL  
 GAHRRPQAPAQDLQGTSSQPRAHRRPQAPARQDLQGMSPRAHRRPQAPARQDL  
 QGTSSQPRAHRRPQAPARQDLQGTSSQPRAHRRPQAPARQDLQGMSPRRGRQQSC  
 RTQRWSLLPSLGSL

## ***FIG. 8***

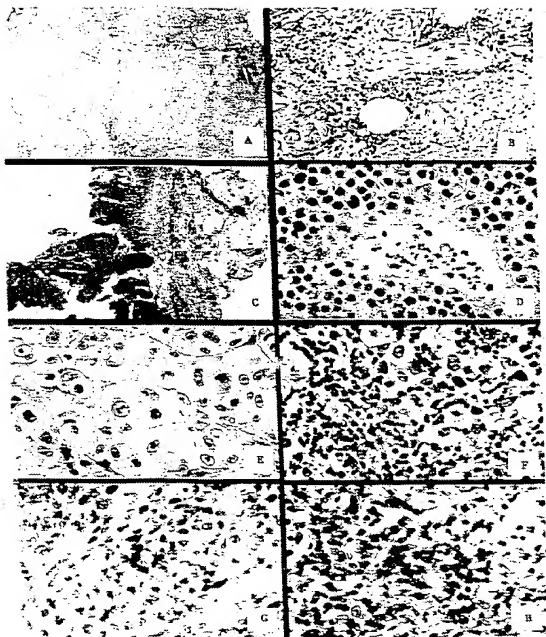
**FIG. 9**



ELISA Plate Results of Anti-MUC-1 Antisera Binding to Related Proline-Rich Tandem Repeat Peptides.

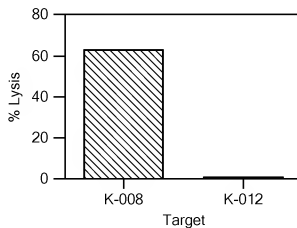


**FIG. 10**



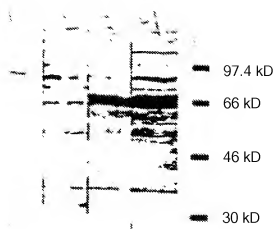
*FIG. 11*

Treatment Day	IL-pg/ml	IL-4 pg/ml	IL-5 pg/ml	IL-6 pg/ml	IL-10 pg/ml	GM-CSF pg/ml	$\gamma$ -IFN g/ml	TNF- $\beta$ pg/m
Tumor	0	0	0	0	0	0	0	0
Day 6	0	0	0	2.78	0	0	50	0
Day 28	163	0	6.45	3.71	20	724	0	50
Day 56	411	45	15.81	1.91	204	804	0	0
Day 150	831	45	21.17	2.23	127	1,027	0	0

**FIG. 12****FIG. 13**

Source	IL-4 pg/ml	IL-5 pg/ml	IL-6 pg/ml	IL-10 pg/ml	GM-CSF pg/ml	$\gamma$ -IFN g/ml
TTLs	166	7.7	2.9	2095	241	171
Metastasis	0	0	1.12	8.4	0	0

**FIG. 14**

**FIG. 15**

Serum → ↓ Tumor	K08	K016	K017	K023	K027	K029	K032
K008 M	++	+	+	++	+++	++	+
K016 V	ND	0	ND	ND	ND	ND	ND
K017 V	0	ND	+	ND	ND	+	ND
K023 V	ND	ND	ND	0	++	1/2+	ND
K023 M	1/2+	ND	ND	+	ND	0	+
K027 M	+++	+	0	0	0	0	+
K029 V	++	0	1/2+	0	+	0	0
K029 M	+	0	1/2+	0	+	0	0

**FIG. 16**

**TRAAM (a novel gene; 5' end)**

TTTCGGTTTCGCTTCCGCCCTCCAGCGCGAGCCCCGCCGCCGAGCATGGACGACCCCGCA  
 CTCGGACTCCACCTTGGGAGGAGGACGAGGAGGATGCGGAGGACGCGGAGGACGAGGACTG  
 CGAGGACGGCGAGGCGCGCGGCCGAGGACGCGGACGAGGAGGACGAGGAGGAGTCT  
 GGAGGACGGCGCGGCGGCCGCCAGCTCGTTTCCAGTCCAGAATGACAGGGTCCAGAAA  
 CTGGCGAGCCACGAGGGACATGTGTAGGTATCGGCACAACATATCCGGATCTGGTGGAAACG  
 AGACTGCAATGGGACACGCCAAACCTGAGTTTCTACAGAAATGAGATCCGCTTCTCGCC  
 CAACGGCTGTTTCATTGAGGACATTTCTCAGAACTGGACGACAACATATGACCTCCTTGA  
 GGACAATCACTCTACATCCAGTGGCTGTTTCTCTCGCAGAACAGGAGTGAATCGGCA  
 TGCCAAAGCCCCCTACGCTCAGGGAGGTCGAGGTGTTTAAAGCTCCAGGAGATCCAGGA  
 GCGGCTTGTCCGGGCTACGAGCTCATGCTGGGCTTCTACGGGATCCGGCTGGAGGACCG  
 AGGCACGGGACGGTGGGCCGAGCAGAACTACCAAGACGCTTCCAGAACCTGAATG  
 GCGCAGGCCAACAACTCCGCATCACACGCATCTCAAGTCGCTGGTGAGCTGGGCT  
 CGAGCATTTCCAGGCGCCGCTGGTCCGCTTCTTCTGGAGGAGACGCTGGTGGCGGGGA  
 GCTGCCGGGGGTGCGGCAGAGTGCCCTGGACTACTTATGTTTCGCGGTGCGCTGCCGACA  
 CCAGCGCCGCCAGCTGGTGCACTTTCGCTGGGAGCACTTCGGGCCCGCTGCAAGTTCTG  
 CTGGGGGGCCCCAAGCAAGCTGCGGAGGTTCAAGCCAGCTCTCTGCCCATCCGCTCGA  
 GGGCTCAGGAAGGTGGAGGAGGAAGGAAGCCCCGGGGACCCGACCAAGGAGGACGAC  
 CCAGGGTCGGACCTGTGGGCCAGAGCATAGCAAGGGTGGGGGACGGGTGGACGAGGGGCC  
 CCAGCCACGAGGAGCTGGAGCCCCAGGATGCGGGACCCCTGGAGAGGAGCCAGGGGATGA  
 GGCAGGGGGCCACGGGGAAGATAGGCCGGAGCCCTTAAGCCCCAAGAGAGCAAGAGAG  
 GAAGCTGGAGCTGAGCCGGCGGGAGCAGCCGCCACAGAGCCAGGCGCTCAGAGTGCCTC  
 AGAGGTGGAGAAAGATCGCTCTGAATTTGGAGGGTGTGCCCTCAGCCAGGCGCAGCTCAG  
 GACGGGGACCCAGGAAGTGGCGGTCAGGACCTGGGGAGGACGTGCAACCTGCGCGGA  
 ACCCTGGGAGCCAGGGTGGCCGACAAGGTGAGGAAACCGAGGGAAGGTGGAT

**TRAAM (amino terminus)**

SVSLPPPARAPPPSMDDPDCDSTWEDEDEDAEDEDCEDEGEAAGARDADAGDEDE  
 ESEEPRAARPPSSFQSRMTGSRNWATRDMCRYRHNYPDLVERDCNGDTPNL SFYRNEIR  
 FLPNGCFIEDILQNWTDNYDLLLEDNHSYIQWLFPLREPGVNWAKPLTLREVEVFKSSQ  
 EIQRLLVRAYELMLGFYGIRLEDRTGTGVRQAQNYQKRFQNLNWRSHNNLRITRILKSL  
 GELGLEHFQAPLVRFFLEETLVRRLELPGVRQSALDYFMFAVRCRHQRRQLVHFAWEHF  
 RPRCKFVWGPQDKLRRFPKPSLPHLEGRKVEEESGSPGDPDHEASTQGRCTGPEHSKG  
 GGRVDEGPQPRSVPEPQDAGPLERSQDGEAGHGEDRPEPLSPKESKRKLLELSRREQPP  
 TEPGPQASAEVEKIALNLEGCALSQGSLRTGTQEVGGQDPGEAVQPCRQLGARVADKV  
 RKPEEGG

**TRAAM (3' end; sequence represents the coding strand of the gene, presented 5' to 3')**

CGCCGTGGCTAGTGGTGGTGCCAGACCTTGGCCCTTGGCCGTCCTGCCCATCGGG  
 GCACCCCAAGGCTGGACACAGTGAGAACGGGGTTGAGGAGGACACAGAAGGTGCAACGGG  
 GCCCAAGAGAGGTACCCCTGGGAGCCCATCGGAGACCCAGGCCCCAGGCCAGGACAC  
 TGCAGGGGACGAGCCAGCCGAGAGCCCATCGGAGACCCAGGCCCCCGCCAGCAGGACC  
 TGCAGGGGACGAGCCGGCCGAGAGCCCATCGGAGACCCAGGCCCCCGCCAGCAGGACC  
 TGCAGGGGACGAGCCAGCCAGGACCCCATCGGAGACCCAGGCCCCAGGCCCGGAGGACC  
 TGCAGGGGACGAGCCAGCCAGGAGCCCATCGGAGACCCAGGCCCCCGCCAGGAGGACC  
 TGCAGGGGACGAGCCAGCCAGGAGCCCATCGGAGACCCAGGCCCCAGGCCCGGAGGACC  
 TACAAGGATGAGCCAGCCAGGCGGGGAGGAGCAGAGGTGACAGGACGACAGGAGTGA  
 GTCTTCTGCCAAGTCTGGGAAGCCTTAAGGAAAGGAGTGCCCGTGGGCTCTTGGTCTCT  
 CTGTCTCTGCTGCGAGGGCTGGGCGCTCCGAGCTGCTGCGGGCTCCCTCAGGCTCTGC  
 TTCGTGACCCGTGACCCATGACCCACAGTGCTGGCCTCTGTGGGGCACTATAGCAGCC  
 ACCAGAGGCGCGAGGGCCCTCAGGGAAGCCCAAGGCTCGAGAAGCCTCTTGGCTCTGGT  
 GTGTCTTCCCAACAGCTCTCCCTTGGCGCCCTGTCTTTGTAATTTGACCTTCTGGAG  
 TGGGGGGCGGCGGACAGGCTGCTTTTCTAGTCTGATGCCAAGCAAGGCTTTCTGAA  
 TAAATTCATTGACTTTG

**FIG. 17A**

**TRAM (carboxy terminus)**

RWL VVVPRWP L PGPLPHRGTPRLD TVRTGLRRTQKVERGPKKVPLGAHRRPQAPAQQ  
 DLQGT SQPRAHRRPQAPAQQDLQGT SRPRAHRRPQAPAQQDLQGT SQSPRRHRRPQAP  
 RQDLQGMSPRAHRRPQAPARQDLQGT SQPRAHRRPQAPARQDLQGT SQPRAHRRPQ  
 APARQDLQGMSPRRGRQSCRTRQWSLLPSLGLSKERSARRRLGPPVPAAGAGASGA  
 AAGSPQALLRDP

**KIAA0603 (in the database as a human brain cDNA of unknown function;  
 the human homolog of mouse TBC)**

GAAC TGAGGAGCTTGTGGAGAAAAGCTATACCAACAACCTCTGTTACTTCGAATGGAA  
 AAAGAAAACCGAGAACTTGAAGCAAGCAGAGATGAACTCCAGTCCAGAAAAGTTAAATTTA  
 GACTATGAAGAAGTTGGTGTCATGTCAGAAAAGAGGCTTAATAACTTGGGATAAGAAGTTG  
 TTAAACTGCAGAGCTAAAATCAGATGTGATATGGAAGATATTCATACTCTCTTAAAGAA  
 GGAGTTCCCAAAAAGTCGACGAGGAGAAATTTGGCAGTTTCTGGCTTTACAGTACCGACTC  
 AGACACAGATTGCCTAATAAACACAGCCTCTGACATATCCTATAAGGAACCTTTTGAAG  
 CAGCTCACTGCTCAGCAGCATGCGATTCTTGTGGATTTAGGAAGGACGTTTCTACTCAC  
 CCTTACTTTTTCAGTACAGCTTGGGCCAGGACAGCTGTCACTGTTTAACTCCTGAAAGCC  
 TATTCCTCTTTTGTCTGGACAAAGAAATGGGATACTGTCAGGGGATCAGCTTTGTGGCTGGA  
 GTCTCTTCTGTCATGAGTGAAGAGCAAGCCTTTGAAATGCTGAATTTCTCATGTAT  
 GACCTCGCTTCCGCAAGCAGTACAGACCTGACATGATGTCTGCTGCAGATTCAATGTAC  
 CAGCTGTCCAGGCTCCTTCATGACTATCACAGAGATCTCTACAATCACCTTGAAGAAAAAT  
 GAAATCAGCCCCAGTCTTTATGCTGCCCTGGTCTCTCACATTTGTTGCCCTCAGTTT  
 TCATTAGGATTTGTAGCCAGAGTTTTTGATATTTATTTTCTTCAGGGAACGAAGTTATA  
 TTCAAGGTTTGACTCAGCTTACTGAGCAGCCAAGAGACACTTATAATGGGAATGTGAGAG  
 CTTTGAAAATATTGTTGAGTTTCTAAAAACAGCGCTACCTGATATGAATACCTCTGAAAT  
 GGAAAAAATTTATACCCAGGTTTTTGAAGTGGATTTCTAAGCAGTGTGATCGCTATGA  
 GGTGGAATATCATGTGCTACAGGATGAGCTTCAGGAATCTCATATCTCTGTGAGGATAG  
 TGAAACTTTGGAGAAGCTGGAGAGGGCCAATAGCCAACTGAAAAGACAACAACTGGACCT  
 CCTAGAAAAATTACAGGTAGCTCATATAAAATCCAGGCCCTTGAATCAAACCTGAAAA  
 TCTTTTGACGAGAGAGACCAAAATGAAGTCTTTAATCCGAGCCCTGGAACAAGAAAAAT  
 GGCTTATCAAAAGACAGTGGAGCAACTCCGGAAGCTGCTGCCCGGATGCTCTAGTCAA  
 TTGTGACCTGTTGCTGAGAGACCTAACTGCAACCCCTAACACAAGCCAGATAGGAAAT  
 AAGCCATAAATTGAAGAGCACGGCTCAGCAGAAAAGTCTCTTAGAATACTACAGAGAGGA  
 AGAGCCTGCATGTCGCTGGCCCAAGGCTGGACCTGAAAGCTGATGGAACCACTTAACT  
 GGTGCTGAGCTCCTAGTCAAGCAGGTGGACCTCGTGCTCATCAGAGCATGCCAATCTAA  
 GCCCATGGACATAGTAGACTGGTTTTTGTGTTGCTATGACATATAAATATATATAAA  
 AATGAACATAGTCTACGTCTTCAGATAAAATGAGTAGATGTATTTAGATTAATTTTTT  
 TAGTCAGAACTTCATGAAATCCACACCAAGGAAAGGTAACCTGAAATTTCCCTTGGACA  
 TATGTGAAATCTTTTGTCTTTATAGTGAACCAAGCCAGAGCATCTTTGTATATTGCAA  
 TATACTTGAAAAAATGAATGTATTTTTTTCTCCAAAGAACAGCATGTTTCACTCAATGG  
 TGAAAAGGTGAAACATTTATGTTAACTTTATGTCTTGTCTTGATATCTACTGACATTT  
 GTCTATATGGAGAAAATGATTACTGGTCATGCTGCTGATTTTTTTGGGAAGGTAGGGTG  
 ATTTCCTCCCTGCTGCTTTGTGCCAATAGCATGTTGCATCTACTGCATTTGAATCTGG  
 TGGCTTACTTTTAAACATACTAAAAACAGTAGGACTTGGCTGAATCTACCCCAAGTAAA  
 GGAGAAATGTGCTTATTTTTTAGCAAACTAACAGCCTTATTCTCAACTAAAAATTCACAC  
 CTGAAAAATTTAAATTTTTTGGTGCCACAGTCACCAAGATGACAAGGATTTGCCACTTTCC  
 ACCAAATTTGAGTGTCTGTAATTTAGGCTCTCTACCTTAAATTCAGTATATAAGGAACG  
 TAAATATGATTGATTTTTTCCAAAGATGACAAGCTGTGTTGAAATACATTTTTCTTTTGA  
 CCAATTTGACAGAATCTAATAAGCTTTAATAATCTTCCCTTTTATGTGAAAAAGTTTGGAG  
 AACTGTGAAATGTTTAGGAACAACTGTTGAAATCCATTGGAAGGGAAAAAGAAAGTGG  
 TACCAGTGTACCAAGCTCAACTAAAACTGCAATTTGCAATTTCACTTTTCACTCTCTC  
 AGCATACAAATAGTCTATTAGAAGACATTACGCATGGTGGGTATAGGCAAGGAAAGTAA  
 TTTTCAAAGTACATTTGCACTTCTCTTTTTCAGAGATGATTCATGATAGCGCTCTGAA  
 AGTGTGATGACGATTTTCCGCTTTCCAAAAAGTATTTATCCTCACTGCTTTTTCAGTAC  
 TTGTATTTTCAGATGGAATATCTGGGGTAATTTTCTCAAAGGAGGTTTGTATACAC  
 AGTGAAATGTATTATAGAGTAGAATAGTAAAGCTCTAGGGGTTTCAGAAAGCTTTGATG

**FIG. 17B**

AACAGATGACAAACATCTGAAACCCCTCCGCACTGTACCCAGTGTGTATATAATGACT  
 TGTTATAGCTCAGTGTGCCCTTGAATCCATACAGTCTTCTAAAGACAATAAAATCTTAT  
 TAATAAAGTAAATGTAACCTCTAAGTTCTAGAAAAAGCTGATTCTGTCTGCCCATCAA  
 TTGGGGGCTACTAATGATTGTGTCTGGATTCTCGAGAATTTCTGATTTGTAGGAG  
 GGGTTTTTTCTTTTACGGTCTGTGATGACAATTACTTTATGGGTGTGATGCACCGATG  
 TGAGCCAAGGAATCTGTTGGGGAAGTTCCGAAAGAAACCTTTCTTTCTTTTATTCAGTT  
 TAAAGTAACTTTATCTGGATGTTTAGAATCAACATTAAAGAGTTATATATTGTTGTTCA  
 GAGATTAAAGCTGACTGTGGATACAATATTTCTTTTGAAAATGAATTTCTTTTTCATTG  
 TGATTTTTAAAAAATGTTGCCAGTTATGCTTCATGCATCGTTACATCTTCATCAGGTT  
 TGAAAAATGTCTAGTTCCTTTGCAATAAATATATTGCTGC

#### UBP-3 (a novel nuclear ubiquitin-specific protease)

MTVRNIASICNMGTNASALEKDIGPEQFPINEHYFLVNFNGTCCYNSVLQALYFCRPF  
 ENVLAYKAQKKKENLLTCLADLFHSIATQKKVGVIPPKFISRLRKENDLFDNYMQQ  
 DAHEFLNYLLNTIADILQEKKQEKQNGKLKNGNMNEPAENNKPELTWVHEIFQGLT  
 ETRCLNCETVSSKDEDFLDLSVDVEQNTSITHCLRDFSNTETLCSQKYCYCETCCSKQEA  
 QKRMVRVKKLPMILALHLKRFKYMQLHRYTKLSYRVVFPLELRLFNTSSDAVNLD  
 RMYDLVAVVHCGSGPNRGHYITIVKSHGFWLLFDDDIVKEIDAQAEIEFYGLTSDISKNS  
 SESGYILFYQSR

#### TPR/UBP-3 (a novel translocation; the 5' end is identical to the nucleoporin

TPR and the 3' end is a novel nuclear ubiquitin-specific protease)

GAGAACTACAAAAAGAAAAAGCAGAAAAATGAAAAATACAAAATGAGCAGCTTGAGAAA  
 CTTCAAGAACAAAGTTACAGATTTGCGATCACAAAATACCAAAATTTCTACCCAGCTAGAT  
 TTTGCTTCTAAACGTTATGAAATGCTGCCAGATAATGTTGAAGGATATCGTCGAGAAAA  
 ATACATCACTTCTGAGAGAAAAACAGAACTCACTGCCAACCTCCAAAGCCAGAACAGATT  
 ATCCATACGATGACTCCGATTTGAGAGGAGCAGCAATGAGAAGCTAGCTGTCCGCCAAGTTT  
 GAGCCGAAAAATTTGAAGAAGGAAAAAGGAAATGCTTAAATTTGCTGAAATTCGCTTTCTC  
 AGCAAGAGAGTCTTTGTTAGCTGAACAAAGGGGGCAAACTTACTGCTAACTAACTCTGC  
 AAACAATTCAGGGAATCTGGAGCGATCTGAACAGAAACCAACAAAGGCTTAGTAGCC  
 AGATAGAAAAATCTGGAACATGAGATCTCTCATCTAAAGAAGAAAGTTGAAAAATGAGGTGG  
 AACAAAGGCATACACTTACTAGAATCTAGATGTTCAACTTTTAGATACAAAGAGACAC  
 TGGATACAGAGACAAATCTTCATCTTAACACAAAAGAACTATTAATAATGCTCAAAAAAG  
 AAATTTGCCACATTTGAAACAGCACCTCAGTAATATGGAAGTCCAAAGTTGCTTCTCAGTCTT  
 CACAGAGAACTGTGTAAGGTCGGCTAGCAACAAAGAAAGATGTGGATGATCTTGTGAGCTT  
 TGCTAAGACAGACAGAAAGAGCAGGTGAATGACTTTAAAGGAGAGACTCAAAAAACAAAGT  
 ACGAGCAATGTGGAACAATATCAAGCAATGGTTACTAGTTTGAAGAATCCCTGAACAAG  
 GAAAAACAGGTGACAGAGAAGTGCCTAAGAATATTGAAGTTGTTTAAAGAGTCAAGCT  
 GAATTCAGACAGAGTTGGAAGAAGTGTGATGGAAGTAGAGAAGGAAAAACAAAGAACTT  
 CAGGATGATAAAGAGAGCCATAGAGAGCATGGAACAACAGTTATCTGAATTGAAGAAA  
 ACACTTTCCTAGTGTTCAAGATGAAGTACAAGAAGCTCTTCAGAGAGCAAGCAGACGCTT  
 AAGTAAAGAGCAGCAAGCCAGACGTGACTGTGAGGAACAAGCTAAATAAGCTGTGGAAGC  
 TCAGAAATAGTATGAGAGAGAAATGATGCTGCATGCTGCTGATGTTGAAAGCTCTACAAGC  
 TGCAGAGGAGCAGGTTTCAAAATGGCATCAGTCCGTGAGCATTTGGAAGGAAACAAACACA  
 GAAAGCAGAAATCACAGTTGTTGGAGTGAAGAATCTTTGGAGGAGAAAGAGAGAGAAATGTT  
 AAAGGATGAAGTTTCCAAATGTGATGTCGCTGTGAAGATCTGGAGAAACAAACAGATT  
 ACTTCATGATCAGATCGAAAAATTAAGTGACAAGGTCGTTGCCTCTGTGAAGGAAGGTGT  
 ACAAGGTCCTCACTGAATGTATCTCTCAGTGAAGAAGGAAAAATCTCAAGAACAAATTTGG  
 AAATTTCCAGATTTATACGACGAGAAAAAGAAATTTGCTGAACATAGGTTTGAAGTGCGTC  
 AGGTTGAGAGCTCGGTTATCGACAAAGGGTTGAACCTTTAGAAGAGAGCTCGACGAGAAC  
 TGCAAGATAGTCTAAATGCTGAAAGGGAGAAAGTCAGGTAACTGCAAAAACAATGGCT  
 AGCATGAAGAATGATGAAGAAAACTGAAACAATGAATGTAGTTATGGAGACCAATAAAA  
 TGCTAAGAGAAGAGAAGGAGAGACTAGAACAGGATCTACAGCAAAATGCAAGCAAAGGTGA

GGAACTGGAGTTAGATATTTTACCCTTACAAGAAGCAAATGCTGAGCTGAGTGAGAAAA  
 GCGGTATGTTGCAGGCAGAGAAGAAGCTCTTAGAAGAGGATGTCAAACGTTGGAAAGCAC  
 GTAACACAGCATCTAGTAAGTCAACAGAAAGATCCAGATACAGAAGAAATCCGGAAGCTCC  
 TTTCTGAAAAGGAAGTTTCACTAAGCGTATTCAACAATTGACAGAAGAAATTTGGTAGAC  
 TTAAGACTGAAATTCGAAGATCAAATGCATCTTTGACTAACCAACGAACCTTAATTCAGA  
 GTCTGAAGGAAGATCTAAATAAGTAAGAAGTGAAGGAAACCATCCAGAAGGACTTAG  
 ATGCCAAAATAATTGATATCCAGAAAAAAGTCAAACTATTACTCAAGTTAAGAAAATTG  
 GACGTAGGTACAAGACTCAATATGAAGAAGCTTAAAGCAACAACAGGATAAGGTTATGGGAGA  
 CATCGGCTCAGTCTTCTGGAGACCATCAGGAGCAGCATGTTTCAGTCCAGGAAATGCAGG  
 AACTCAAAGAAACGCTCAACCAGCTGAAACAAAATCAAATCACTTGAAGTCAAGTAG  
 AGAATTTGCAGAAGACATTATTTGAAAAAGAGACAGAAGCAAGAAATCTCCAGGAACAGA  
 CTGTGCAACTTCAGTCTGAACCTTTCACGACTTTTGCAGGATTTTCAAGATAGAACCACAC  
 AGGAGGAGCAGCTCCGACAAACAGATAACTAAAAAAGAACTCTGTCGCAATTCGGCAC  
 GAGCTCCAGCCAAAATTGAAAGCCGAGCCAGGCCGCCGCTTGCCGCCCGGCTCCCC  
 GCCAGCGCCACCATGGGCGAGTCCCGGTTTCCCTTGTAAAGATGGCGGTGAGGGATCG  
 CTGCAACCTTTAGATTAAATGACTCTCCGAAACATCGCTCCCATCTGTAATATGGGCACC  
 CAATGCTTTTGTTTTGGAAAAAGACATTGGTCAGAGCAGTGTTCCAATCAATGAACACTA  
 TTTTCGATTGGTCAATTTTGGAAACACATGCTACTGTAACCTCGTCTTCAGGCATTGTA  
 CTCTGCCGTCACTCCGGGAGAATGTGTTGGCATACAAGGCCAGCAAAAGAAGAAGGA  
 AACTTGTCTGAGCTGCTGGCGGACCTTTTCCACAGCATTGCCACACAGAAGAAAGAGGT  
 TGGCGTCTGCCACCAAGAAAGATTCAATTCAGGCTGAGAAAAGAAATGATCTTTGTA  
 TAATACATGCAGCAGGATGCTCATGAATTTTAAATTATTTGCTAAACACTATTGCGGA  
 CATCTCTCAGGAGGAGAAGAAACAGGG

**BRAP-2/H<sup>+</sup>-ATPase (5' portion nearly identical with BRAP-2; 3' end identical to a portion of an accessory unit of H<sup>+</sup>-ATPase)**

AACAGATGGAAAAATAGTACAGTATGAATGTGAGGGGGATCTTGCAGGAAGAGAAAAAT  
 AGATGCCTTACAGTTAGAGTATTCATATTTACTAACAGCCAGCTGGAATCTCAGCGAAT  
 CTACTGGGAAAAACAAGATAGTTCGGATAGAGAAGGACACAGCAGAGGAAATTAACAACAT  
 GAAGACCAAGTTAAAGAAACAATTGAGAAGTGTGATAATCTAGAGCACAACTAAATGA  
 TCTCTTAAAGAAAAAGCAGTCTGTGGAAAGAAAGTGCATCAGCTTAAACACAAAAAGTGGC  
 CAAACTCACCACGAGCTCAAAGAGGAGCAGGAAATGAACAAGTGTTCGAGGCCAACCA  
 AGTCTCTCTGCAGAACAGCTAAAAGAGGAGGAGAGGGTGTGTAAGGAGACCTGTGACCA  
 AAAAGATCTGCAGATCACCAGATCAGGAGCAGCTGCGTGACCTCATGTTCTACCTGGGA  
 GACACAGCAGAAGATCAACCATCTGCCTGCCGAGACCCGGCAGGAAATCCAGGAGGGACA  
 GATCAACATCTCCCATGGCTCGGCTCGAGCCTGCCTCTTCGGGGGGCAGTGGGAAGT  
 GCCCTCCAGGAAGGGCCGAGCAAGAGGGGCAAGTGACCTTCAGAGCAACAGACATCCCT  
 GAGACTGTTCTCCCTGACACTGTGAGAGTGTGCTGGGACCTTCAGCTAAATGTGAGGGTG  
 GGCCCTAATAAGTACAAGTGAGGATCAAGCCACAGTTGTTGGCTTTTCACTTTGCTAGT  
 GTGTGATGTAGTGAATGTAAAGGGTGTGACTGGAGAGCTGATAGAAAGGGCCTGCGTTT  
 GAAAAGGCTTAAAGAGTCTCACTAACCTCACATTTCTAATGACCATTTTGCTTCTGCTTG  
 GTAGAAGCCCCAATCTGCTGTGCATTTTCCATTGATTTATGGAAGTGGCGCATTTTGA  
 CATTCAAGTCTGGGAGTGGTTAAGATGTTAAGTATTTCTGTAACCTCAACGTAAGTAAAG  
 TTATCTAGCACTAAAGCACCAAACTCTCTGAGGGCATAACAGCTGCTTTAAAGAGAGGT  
 TTCATTGGCTATTAAGGAGTTATGAAAACCTCCCTAGCAATAGTGTATATCATATCATCAT  
 CTCCTCTCTCTCGGGAGTGAAGAAATTTGCTGAATGTATCTGAAAAGAGGCCCTGGT  
 AGTAAACCAAGGCCCTGGCTCTTACCAGCAGTCATCTCTTCTGCTCTGGGGCAGCCAG  
 GAAAAACAACACCCCGGGGCACATTTGGTAGACTCAGTGTAGGAAAAATGGTGGCAGT  
 CCACTGTTATTTTGGTGACTTCGTACGTCAATTATGAACCCCAATTAAAGAGGAGGCTT  
 AATGGCTGTTCCCAAATCAATCTCAGAGTGGGTATCCTAGCATCTAGCAAGACTGAT  
 GGGGAGATTTTCTATCCGTGTGAAAATGTAGAGTGAGGCCTCTGACTAGCTAATTTGTGTA  
 TTTTGTGGGTTAGTATTTCTAAATGTTTACAAAATATTGGGCTGCATGTTCAAGTTTG

**FIG. 17D**



CAGCTAGAGGGAGCTTGGGCAGATTTTCAATTACGCTTTCAGATATAACCAAAAGCTGT  
 TTCTAAATCCTAAAATTAGAAATTTCAACAGAGCCCTTTAGAACAGTCATATAACGCTT  
 GTGTGGGCCAACAGAGGGGCTGTGACTCTCTCTGGAACCATAAATGTCAAAATAATTTAT  
 AACCTGCGATAATTGAGCAAACTTAAAAAAGACCTGTGTGGAAATTTAGTTTCTTGGAG  
 AGGTAGAGGGATAGGTTAGTAAGATGTATTGTTAAACAACAGGTTTATAGTTTTGCTTTA  
 TAATTAGCCACAGGTTTTCAAATGATCACATTTAGAATAGGTTTTAGCTGTAATTAG  
 GCCTCATCCCTTTGACCTAAAATGCTTTACATGTACTTGTAGACCATCAACTGTATCA  
 CTAATCACCATCTGTTTTTGTGGGATGTGCTGCGACCATTTCCCAAAAACTTTACGTGTA  
 ATGTTGCAAAATGAATGTACTCAGACATTTCTAATTTTTACTTAGGGCAGACCAACTCTT  
 TGAGTCTCTCTTGGACTTATATATACAGATATCTTAAGAGTGGGAATGTAAAGCATAAACC  
 TAATTCTCTTTCCATAGAGATTCTATTTTATTTAAAACTATTTTTACACTAGTTAGAA  
 TCCTGCTGTTTTGGATCAAGTACTTGTCTTGCATGTCTGACCTTGCAGAAGCTGGGGTGG  
 ATCATAGCATACTAATGAAGAGAATTAGAAGTAGTTTACAAAGCTCGCTCACTCCTCATT  
 TCTCTGATCCCTCTATCCAGTGGCCCCACCACCTGGGAAAAACAGATTTTTCACT  
 ACAGGTGGGATAAATGCTCTGAAAGGCTGTGCCAGAGGAATGAGCAAAATAGGCAAGTGT  
 TTCAAACACTTTGGAGTTTACAAAAAATATGTCCAGAAAAAATAAGCTCGTGGCGA  
 ATTCCGACAGGGGAGGACTGACTCCCCCACCCTTTGGGGTGCAGGAACCTCAACCTGAC  
 TGGCTCTCTTCCGAATGACTCCTTTGCCAGGCTCTCACTGACCTATGAACGACTCTTTGG  
 TACCACAGTGACATTCAGTTCACTTGTGCCAACCGCTCTACCCAGTGTCTGCCGGCA  
 CTGTTTACCATGGAGCGCTCGAAGTCCACAGCAATGGCTCGTGCCTACTTCAATGC  
 TTCAGAGCTCAGGGCCAGCATCTACTCTTCCACTGCGAGTATGTGACGAGCTGAG  
 CAAGAAGGGTAGTCTCTCTGTGGCCCGCAGCAGCCCTCTCCCTGGCAGATGATGCTTCA  
 GGACTTCAGATCCAGGCTTTCAACGTAATGGGGAGCAGTTCTCTACGCCAGCAGCTG  
 TGCCAGCTTCTCTCCCCGGCATCTGGATGGGGTGTCTCACCTCCTGTTTATGCTCTT  
 CATCTTCACTATGGCTGCACATGATCTCAGCTCAAGACCATGGATCGTCTTGTATGA  
 CCACAAAGGCCCACTATTTCTTGAACCAAGTTGTGTGACCTGTGCCAGTGGGGGGT  
 TGAGGGTGGGACGGTGTCCGTGTTGTGCTTTCCACCCCTGCAGCGCATGGACTGAAGA  
 GCTTCCCTCTTCTACTGACGATGAACCTGCAAGCTCCCTCAGCCCATCTTGTCTCCCT  
 TTAGCCCGCTGAGGAGCTTTCTTGGGCTGCCCCATCTCTCCCAACAAGGTGTACATAT  
 TCTGCGTAGATGCTAGACCAACAGCTTCCAGGGTTCGTGCTGTGAGGCGTAAGGGAC  
 ATGAATCTAGGGTCTCCTTCTCCTTATTTATTTCTGTGGCTACATCATCCCTGGCTGT  
 GGATAGTGCTTTTGTGTAGCAATGCTCCCTCCTAAGGTATAGGGCTCCCTGAGTTTGT  
 GGAGTGTGGAACTACTTAACTGTCTGCTGCTTGGCTGTCTGTTATCTGTTTCTGTT  
 GATGTTGTGCTAACAAATAAGAGTACACGGGTTATTTCTGTGGCTGAGAAGGAAGGGA  
 CCTCCACGACAGGTGGGCTGGGTGCGATCGCCGGCTGTTTGGCATGTTCCACCCGGGAGT  
 GCCGGCAGGAGCATGGGTGCT

**K008-1 (a novel gene whose product bears homology to ankyrin containing proteins)**

AAATATAGATCTCGACCTCGAAATTTGACAGCTTTGCAGCATGGTCTAGGAGGATGGAC  
 TGATGGAATGTTTGAAGCTTTAACTACAACCTGGAAGTGTGTTGGCATTGATGAAGATCA  
 TGACATTTGATGACAGTATCCAAGTGGCAATAGGTGGACCTTCAATCTGCTGTTCTCAC  
 TAAAGCGCAACTTTGTCCGAAGTGGAGATGCTGCTCAGGGTGCAGAGGAGGACCTCGA  
 GTTTCAAGTGGGTGATCTTTGTACAAGTTGTTATGACCTGGAACGAATTAACCTTCTACA  
 AAGAGACATGGAGAATGGGCTGAAGCGATGCTTCCAACCTTAGGTAAAGTTGGCCGAGT  
 ACAACAGATTTATTGACAGAGTGATTTAAAGGTGGAAGTTTGTGGAACATCTTGGACATA  
 CAATCCAGCAGCAGTTTCCAAGGTGGCATCTGACGAGTACAGCCATTAGCAATGCATCTGG  
 TGAAGAGCTCTCACAACTCTGAAGAAATTAATTTGAACCCCAAGAATCTGGTGACCTCAA  
 TGAAGAAATAGTTAAAGGCTGCTGCCAATGGAGATGTTGCTAAAGTGAAGAGTTGCTTAA  
 AAGACAGATGTGGATGTAATTTGGGCAATGTGCTGGCCACACAGCTATGCAAGCTGCTAG  
 TCAGAAATGGACATGTTGACATTTGAAGTTACTTTTGAAGCAAAACGTGGATGTCAAGC

**FIG. 17E**

AGAGGATAAAGATGGTGATAGAGCAGTTACCATGCAGCTTTTGGAGATGAAGGCCTGT  
 TATAGAAGTACTACATCGAGGTAGTCTGATTTGAATGCTCGAAACAAGCGCCGACAGAC  
 ACCACTTTCATATTGCTGCTCAATAAAGGTCATCTTCAAGTTGTGAAGACTTTATTGGACTT  
 TGGCTGTCATCCCGAGTCTCCAGGATCTGAAGGTGATACCCCTCTTCATGATGCAATAAG  
 TAAGAAACGTGATGATATCTAGCAGTTCTTTTGAAGCTGGAGCAGATGTTACCATCAC  
 AAACAATAATGGATTAAATGCTCTGCATCATGCTGCACTAAGGGGAAATCCAGTGCAAT  
 GCGTGTTTTACTATCTAAATTACCAAGACCATTGGATTGTGGATGAGAAGAAAGATGATGG  
 TTATACTGCCTTACATCTGGCTGCCCTTAATAATCACGTAGAAGTGGCTGAACCTGTTGGT  
 ACATCAGGGTAATGCAAACTGGATATCCAGAATGTGAACCAACAACTGCCCTACACCT  
 TGCTGTTGAACGACAGCATACCCAGATTGTTAGGCTTTTGGTCCGTGCAGGTGCCAAGCT  
 TGATATTGAGGATAAGGATGGGGATACTCCTTTGCATGAAGCTCTAAGGCATCACACTTT  
 GTCTCAGCTACGTCACTCCAAGATATGCAAGATGTGGGGAAGGTGGATGCTGCCTGGGA  
 GCCATCCAAAAACACGTTAATAATGGGACTTGGTACCCAGGGGGCAGAGAAGAAGAGTGC  
 AGCATCTATTGCCTGTTTCTTGGCAGCCAATGGTGCTGACCTGAGCATTGCAAAATAAGAA  
 GGGTCAATCGCCACTTGATCTGTCTGCTGATCCGAATCTCTGCAAGGACTGGCAAGGTG  
 TCATAAGGAAAAAGTCAGTGGTCAAGTGGGTTCTCGGAGTCTCTATGATTAGTAATGA  
 TTCTGAAACCTTAGAAGAGTGTATGGTGTGCTCAGATATGAAGAGAGATACTCTTTTGGT  
 TCCATGTGGACATTTGCTACCTGTTCTTTATGTTCTCCAGTGTCTCAAGAAATGCCATAT  
 CTGTAAGAACACAGGTTCAATCCAGGACAAAGATTGAAGAATGTGTGGTATGCTCTGACAA  
 GAAAGCAGCTGTTCTTTTCAACCTGTGGCCACATGTGTGCTTGTGAGAACTGTGCTAA  
 CCTGTGAAAAAGTGTGTGCAAGTGTGAGCAGTAGTTGAACGAAGAGTGCCTTTTCAATT  
 GTGCTGTGGAGGGAAGATTGAGAAGATGCCACTGATGATATCTCAAGTGGGAATATTC  
 AGTATTACAAAAGGACAAGGATAATACCAATGTCAATGCAGATGTGCAAAAGTTGCAGCA  
 ACAGTTACAAGACATTAAAGAGCAGACAATGTGCCCTGTGTGTCTAGATCTGTGAAGAA  
 TATGATTTTCTTTGTGGTCACGGAACCTGTCAACTCTGTGGAGACCCGATGAGTGAATG  
 TCCTATCTGTGCGAAGGCTATTGAACGAAGGATCTTTTGTATTAACAAAGACATGGT  
 GTATTTTGTAGTCAATGTATCTAGTCATGAGATCTTAATAGGCTTTTGTATCTAGTTGGA  
 AGTTCTGATGAGTTAATTTCTAATATCATAGTTCTTTACTAGAGTATAAATGGGCTGTA  
 AATGTACCGAAGCAAAAAACCCTACAAAATGGTGTTGGAAATTTGTTTTTGTGTTTTGT  
 TTTAAATTTGAAACATCAAATTCATGTAACCTCATAGGATAAATTACCTTTGGCTTCTAAG  
 AGGAAAGTCTTTAAGGATATCCTTTTTTAAAAAATGCAATTTTCTCTTATAATTTGTA  
 AATTTGTGGAGTCTCAAAAGACATAATCTTTGTGATCAGTTATCTCTTATCATCTG  
 GTTTTACACAGTGAGTTGATAACAGGTTCTCTGAGAAGTCATGCATCAAAATAAAGAGGC  
 AGGTCAAAACAATTATGTACATGGTAAATTAATAAATGACAGTACAAGTCCAGATAGTT  
 AAGGGAATACCGAAGGGATGATCTTTTTTAAAGATAACAGGAAGTTACCCACATGTTTG  
 TTTCTGAATCTTTAGAGTAAATGGAAGCATAGAATGAGGGAATATGACTTTGCAATCTG  
 CTGTTTCTTAGATGCAAAAGGAACATTGTTAACTTGAATCAGATACCAGTTTCAAGG  
 TGACTAGAGACAAGAAAAAGGAAAAATAAGCAATAATAGTGGGCAACTGAAGGAAAAA  
 AAAACGAGTATCTATTAACCTGGCCACTAACAGTTGCCCTTCTTACATTAATTTATACACT  
 ATTTTGTTCAGGCCAGTGTTTTTAAAAAATCTATGAAAGGTGACTTCCGGTTTTCTGT  
 GACTTATCTGGGCTTGATCTGACCAGTGAAATGACATTGCCCTATTGGACCTCTGA  
 GGTCTATTATTAGCTTTGCAGATGTACATAGTATCCAGTGATCTGCAAAATTAATGCCCT  
 TTCCAAGAAAAAATCTTTTCTCTCTGTATCAGTTAATCTGACAGGTATTAGTGATCTG  
 TCTTCATTATAGGCTTATTTCCATTATCTCTTCTTTATAGTATTTTTTGTATAAAGA  
 AAACAGCTTTTCTGTGTATACCTACGGATGAGGGTATTATTTAACTGCCAACAAATCC  
 AAGACATGGTCAATAACCTAATTTATAAATACTTTAGAAAGAGTGACCAGGACATGTATAG  
 AATGTCTGCTTACCTGTAGACTTT

**FIG. 17F**

**K008-1**

NIDLLEIVQSLQHGHWGTDGMFETLTTTGTVCIDEDHDIVVQYPSGNRWTFNPAVL  
 TKANIVRSGDAAQGAEGGTSQFQVGDVQVCYDLERIKLLQRGHGEWAEMLPGLGKVG  
 RVQQIYSDSLKVEVCGTSWTYNPAAVSKVASAGSAISNASGERLLQLLKKLFETQESG  
 DLNEELVKAAANGVDVAKVEDLLKRPDQVNVGQCAGHTAMQAAASQNGHVDILKLLKQNV  
 DVEAEDKDGDRAVAAAFAFGDEGAVIEVLHRGSADLNARNKRRQTPLHIAVNGKHLQVVK  
 TLLDFGCHPSLQDSEGDTPLDHDAISKRRDDILAVLL EAGADVTITNNNGFNALHHAALR  
 QGPAMRVLLSKLPRPWIVDEKKDDGYTALHLAALNNHVEVAELLVHQGANLNDIQNVN  
 QQTALHLAVERQHTQIVRLLVRAGAKLDIQDKDGTPLHEALRHHTLSQLRQLQDMQDV  
 GKVDAAWEPKNTLIMGLGTQGAEEKSAASIACFLAANGADLSIRNKKGQSPDLCDPDP  
 NLCKALAKCHKEKVSQVGSRSPTSMISNDSETLEECCMVCSMDKRDTLFGPCGHAIATCSL  
 CSPRVKCKLICEQVQSRKIEECVVCSDKKAVALFQPCGHMCACENCANLKKKCVQCR  
 AVVERRVPFIMCCGGKSSDATDDISSGNIPVLQDKDNTNVNADVQKLQQQLQDIKEQ  
 TMCPCVCLDRLLKNIIFLCGHGTCQLCGDRMSECPICRKATERRILLYZLRHMVYFVSZCI  
 ZSZDLNRLILIZLEVLMSZFLISZFLYZSIIGLZMYQNKPKYKMLVEIVFFVFLNLKHQ  
 IYHVTIRIYLLWLGRGSKFDILFZKIAFFSYNLZICWISKDITLDCQLSFISISWFYTVS  
 ZZQVLZEVMHQIKEAGQTIMSHGKLZNDSTSSRZLREYRRDSSFKITGSPHYVCFZIL  
 RVNGSIEZNGKDEFAFLFRFRKNIVZLESDYQFQGDZZTRKGKISNNSGQLKRKKRV  
 SINWPLTYAFLTLIYTLFCSASVFKKNLZKVYFRFSVITYLGLIZPVKZHCPIWTSEVL  
 FSFADVHSIPVICKINAFSKKKSFLLCISZFZQCCZFCLHYRPFHYFLFLYSIFCYKEN  
 LSLSVYTYGZYLLNCQYPRHQZPNYKYFRKSDQDMYRNVCLPVD

**MAIAP (a novel member of the "inhibitor of apoptosis" family)**

CGGCACGAGCTCTGTGCCGGGCAGGCCTGTGCCTATCCCTGCTGTCCCCAGGGTGGGCCCC  
 GGGGTGACGAGCTCCAGAAGGGCCAGCTGGGCATATTCTGAGATTGGCCATCAGCCCCC  
 ATTTCTGCTGCACAAACCTGGTCAGAGCCAGTGTCCCTCCATGGGACCTAAAGACAGTGCC  
 AAGTGCTGCACCTGGACCAAGCCAGCCAGCCAGTGTGGGACGCCGATGGTCCACGACGAG  
 GAGCGCTGTGGACCCCGCTCTCTGGGCAGCCCTGTCTAGGCCCTGGACACCTGCAGAGCC  
 TGGGACACAGTGGATGGGCAGATCTCTGGGCAGCTCGGGCCCCCTGCAGAGGAGGAAGAG  
 GAGGAGGGCGCCGGGCCACCTGTCTCAGGGGGCTGCTTCCCCGGCATGGGCTCTGAG  
 GAGTTGCGTCTGGCCTCCTTCTATGACTGGCCGCTGACTGCTGAGGTGCCACCCGAGCTG  
 CTGGCTGCTGCCGGCTCTTCCACACAGGCCATCAGGACAAGGTGAGGTGCTTCTTCTGC  
 TATGGGGGCTGCAGAGCTGGAAGCGCGGGGACGACCCCTGGACGAGCATGCCAAGTGG  
 TCCCCAGCTGTCAAGTCTCTGCTCCGGTCAAAAGGAAGAGACTTGTCCACAGTGTGCAG  
 GAGACTCACTCCAGCTGCTGGGCTCTGGGACCCGTGGGAAGAACCGGAAGACGACGCC  
 CCTGTGCCCCCTCCGTCCCTGCTCTGGGTACCCTGAGCTGCCACACCCAGGAGAGAG  
 GTCCAGTCTGAAAGTGCCACGAGGACGAGGAGCCAGGATGTGGAGGCGCAGCTGCGGCGG  
 CTGCAGGAGGAGGAGGAGCTGCAAGGTGTGCTGGACCGCGCCGTGTCCATCGTCTTGTG  
 CCGTGCGGCGCACCTGGTCTGTGCTGAGTGTGCCCCCGGCGCTGCAGCTGTGCCCATCTGC  
 AGAGCCCCCTGCGCAGCCGCTGCGCACCTTCTGTCTAGGCCAGGTGCCATGGCCGG  
 CAGGTGGGCTGCAGAGTGGGCTCCCTGCCCTCTCTGCTGTTCTGGACTGTGTTCTGTG  
 GCCTGCTGAGGATGGCAGAGCTGGTGTCCATCCAGCAGTACCAGCCCTGATCCCCGAC  
 CACCGCCAGGGTGGAGAAGGAGGCCCTTGTCTGGCTGGGGATGGCTTAACCTGTACCT  
 GTTTGGATGCTTGAATAGAAATAAAGTGGGTTTTTCCCTGGAGGT

**FIG. 17G**

**MAIAP**

MGPKDSAKLHRGPQPSHWAAGDGPQERCGRPSLGSPLGLDTCRAWDHVDGQILGQLRPLTEE  
 EEEEGAGATLSRGPAPFPMGSEELRLASFYDWPLTAEVPELLAAAGFFHTGHQDKVRCFFCYGG  
 LQSWKRDDPWTEHAKWFPSQFLRLSKGRDFVHSVQETHSQLLSWDWPWEEPDAAPVAPSVPA  
 SGYPELPTPRREVQSESQAEPGARDVEAQLRRLQEERTCKVCLDRAVSIYFVPCGHLVCAECAPG  
 LQLCPICRAPVRSRVRTLFSZARCHGRPGGLQSGLPAPLCLFWTVFWAC

**Nor-90 (originally identified as an autoantigen in scleroderma pigmentosum patients)**

GAAGTGAAGAGCTTTGTGGAGAAAAGCTATACACCAACAAATCTTGTACTTCGAATGGAA  
 AAAGAAAACAGAAACTTGAAGCAAGCAGAGATGAACTCCAGTCCAGAAAAGTTAAATTA  
 GACTATGAAGAAGTTGGTGCATGTCAGAAAGAGGTCCTAATAACTTTGGGATAAGAAGTTG  
 TTAAGCTGCAGAGCTAAAATCAGATGTGATATGGAAGATATTCATACTCTCTTAAAGAA  
 GGAGTTCCCAAAAGTCGACGAGGAGAAAATTTGGCAGTTTCTGGCTTTACAGTACCGACTC  
 AGACACAGATTGCCTAATAAAACAACAGCCTCCTGACATATCCTATAAGGAACTTTTGAAG  
 CAGCTCACTGCTCAGCAGCATGCGATTCTTGTGGATTTAGGAAGGACGTTTCTACTCAC  
 CCTTACTTTTTCAGTACAGCTTGGGCCAGGACAGCTGTCACTGTTTAACTCTCTGAAGGCC  
 TATTCACTCTTTGCTGGACAAAAGAAATGGGATACCTGTCAAGGGATCAGCTTTGTGCTTGA  
 GTCCTGCTCTGCACATGAGTGAAGAGCAAGCCTTTGAAATGCTGAAATTCCTCATGTAT  
 GACCTCGGCTTCGCAAGCAGTACAGACCTGACATGATGTGCTGCAGATTCAAATGTAC  
 CAGCTGTCCAGGCTCCTTCATGACTATCACAGAGATCTCTACAATCACCTTGAAGAAAAAT  
 GAAATCAGCCCCAGTCTTTATGCTGCCCTCGTTCCTCACATTGTTTGCCTCTCAGTTT  
 TCATTAGGATTTGTAGCCAGAGTTTTTGATATTATTTTTCTTCAGGGAATGAAGTATA  
 TTCAGGTTGCATCAGCCTACTGAGCAGCCAAAGAGACACTTATAATGGGAATGTGAGAG  
 CTTTGAATAATTTGTTGAGTTTTCTTAAAAACACGCTACCTGATATGAATACCTCTGAAAT  
 GGAATAATTTATACCCAGGTTTTTGAGATGGATATTTCTAAGCAGTTGCATGCCTATGA  
 GGTGGAATATCATGTCTACAGGATGAGCTTCAGGAACTCTCATATTCCTGTGAGGATAG  
 TGAACCTTTGGAGAAGCTGGAGAGGGCCAAATAGCCAACCTGAAAAGACAAAACATGGACCT  
 CCTAGAAAAATACAGGTAGCTCATACTAAAAATCCAGGCTTGGAAATCAAACTGGAAAAA  
 TCTTTTGAAGAGAGAGACCAAAATGAAGTCTTTAATCCGGACCTTGGAAACAGAAAAAAT  
 GGCTATCAAAAAGCAGTGGAGCAACTCCGGAAGCTGCTGCCCGCGGATGCTCTAGTCAA  
 TTGTGACCTGTTGCTGAGAGACCTAACTGCAACCTAACAACAAGCCAGATAGGAAT  
 AAGCCATAATTGAAGAGCACGGCTCAGCAGAAAGTCTCCTTAGAATACTACAGAGAGGA  
 AGAGCCTGCATGTGCTGGCCCAAGGCTGGACCTGAGGCTGATGGAACCACTAATACT  
 GGTGCTGAGCTCCTATGACAGCAGGTGGACCTCGTGCTATCAGAGCATGCCAATCTAA  
 GCCATTGGACATAGTAGACTGGTTTTTGTGTTGCTATGACATATAAATATATATATAA  
 AATGAACATAGTTTCATGCTTTTTCAGATAAAATGAGTAGATGTATATTTAGATTAAATTTTT  
 TAGTCAGAACTTCATGAAATCCACACAAAGGAAAGGTAACCTGAAATTCCTCTGGACA  
 TATGTAAATCTTTTGTCTTTATAGTGAACAAAGCCAGAGCATCTTTGTATTTGCCA  
 TATACTTGAATAAATGAATGTATTTTTTCTCCAAGAACAGCATGTTTCACTCAATGG  
 TGAAAAGGTGGAACATTTATGTTAACTTTATGTGTTCTGCTTGATATCTACTGACATT  
 GTCTATATGAGGAAAATGATTACTGGTCATGCTCCTGTGATTTTTTGGGAAGGTAGGGTC  
 ATTTCTCCCTGCCTGCTTTGTGCCAACTAGCATGTTGCATCTACTGCATTATGAATCTGG  
 TGCGTTACTTTTAAACATACTAAAAACAGTAGGACTTGGCTGAATTCACCCCAAGGTAAA  
 GGAGAAATGTTGCTTATTTTTAGCAAACCTAACAGCCTTATCTCAACTAAAAATCACAC  
 CTGAAAATTTAAATTTAGGACCTAAAAATGTCTAGATTAGCTTTTCTGTTTTTATTTGA  
 ATAACCTCATTGAGTTGTGAATGAATTCCTCTTTATTTGGTGCCACAGTCACCAATGACA  
 AGGATTTGCCACTTTCCCAACAAATTTGTGAGTGCTTGTAAATTAGGTCTCTACTACCTTAA

**FIG. 17H**

ATTCAGTATAAGGAAACGTAATTATGATTGATTTTTTCCAAAGATGACAAGCTGTGTTGA  
 AATACATTTTTCTTTTGACCAATTGACAGAATCTAATAAGCTTTAATAATCTTCCCTTTT  
 TATGTGAAAAGTTTTGAGAACTGTGAAATGTTTAGGAACAAACTGTGAAATCCATTGGGA  
 AGGGAAAAAGAAAGTGGTACCAGTGTACCAGCTCAACTAAAACTGCAATTTGTGCATT  
 TCAACTTTTTCACTCTCCAGCATACAAATAGCTCATTAGAAGACATTCACGATGGTGGG  
 TATAGGCAAGGAAAGTAATTTTCAAAGTACATTTGCAGTTCTCTTTTTCAGAGATGATTC  
 TATGATAGCGCCTCTGAAAGTTGATGCAGCATTTTCGCCTTTCACAAAAGTATTTATCCT  
 CACTGCTTTTTGCAGTACTTGATTTTTACAGATGGATTCTGGGGTAAATTTTCTCAA  
 AGGGAGTTTTGTATACACAGTGAAAATGTATTATAGATAGAATAGTAAAGCTCTAGGGG  
 TTTTCAGAAAAGCTTTGATGAACAGATGACAACATCTGAAACCCCTCCGCACTGTTACCC  
 AGTGTGTATATAATGACTTTGTTATAGCTCAGTGTGCCCTTGAATCCATACAGTTTCTTAA  
 AAGACAATAAATCTTATTAATAAAGTTAATGTAACCTTAAGTCTAGAAAAGTCTGAT  
 TCTGTCTGCCCATCTCAATTGGGGCTACTAATTGATTTGTTGCTTGATTTCTTGAGAA  
 TTTCTCTATTTGTAGGAGGGGTTTTTCTTTTTACGGTCTGTTGATGACAATTACTTTAT  
 GGGTGTGATGCACGATGGTAGCCAAGGAATCTGTTGGGGAAGTTCGGAAAGAAACCTTT  
 TCTTTCTTTTATTCAGTTTAAAGTAACTTTATCCTGGATGTTTAGAATCAACATTTAAGA  
 GTTATATTATGGTGTTCAGAGATTAAAGCTGACTGGATACAATATTTCTTTTAAAAAT  
 AATTTTCTTTTCTTTTGTGATTTTTAAAAAATGTTGCACCAAGTATGCTTCATGCATCG  
 TTACATCTTCATCAGGTTAATGTAATGCTAGTTCCTTTGCAATAAATATATTGCTGC

**BR-1 (a novel gene; likely an alternatively spliced form of BR-2)**

GCTGACTGGCTAGCACAAAAACCTCTCAATGCTATGGGAAAGACAGAAGAGGAT  
 TCTAAAAGCATTAAAAGTGATGTTCCAGTGACTTGAAAAGGTGAAAAGGAAATAAACAT  
 GATGATGGTACGCAAAAGTGATTACAGAGAAGCGTGGGGCTCAGAGCGCTGTAGCAAAAGCT  
 GCAACTCTTTGAGGAACACTTAAGACGCCACCATTCAGAACACAAAAGCTACAGAAGGTC  
 CAGGCTACTGAAAAGCATCAAGACCAAGCTGTTACTAGCTCTGCGCATCAGAGGGGGG  
 CATGGTGTCCCATGGGAAATTTGTTAAACAGAAATCAGAGGAGCCATCGGTGCTAATA  
 CCCTTCTACAAACTGCATTATTAAGAAGTTCAGGGAGTCTTGGGCACAGACCAAGCCAG  
 GAGATGGATAAAATGTTAAAAAATCAAGCAACTCTGCTACTTCTGAAAAGGATAATGAT  
 GATGACCAAAGTGACAAGGGTACTTATACCATGAGTATAGAGAATCCCAACAGTGAGGAA  
 GTGGAAGCAAGAAAAATGATTGACAAGGTGTTTGGAGTAGATGACAATCAGGATTATAAT  
 AGGCTGTTATCAACGAAAAACATAAAGATCTAATAAAGATTGGGCTCTCAGTTCTGCT  
 GCAGCAGTAATGGAAGAAAGAAAACCACTGACTACATCTGGAATTCACCACTCAGAGGAA  
 GGCACACTTCTCATCTGGAAGCAAAAGTGGGTTTACAGTGGGCTATTTGGCTGCCAAT  
 CATACAGGCATATCAAGAAGAAAGGATAATGGAATTTTCTGCACCTCTCTTATAGAGA  
 ATGAGACAGAGATCAGTGAGTCTGGCATGACAGTGAGAAGTACTGGCTCTGCAACTCTCT  
 TTGCTAGCCAGGGAGAGAGAAGGAGACGAACCTCTCCAGCTTCCAAATGAAGAAAAGT  
 CTCTTGAGAGCTCAGAGCAAAAGGTTGTAACACAGAGGTGAGAGATAGGAGAAAAACAAG  
 ACACAGAATCTCAGGAAGAAAGAAACACCTACACAGGTATACCAGAGAAATAAACCAAGATG  
 CTGACAGACCTTGTAGTAAAAAGAACAGGGCAGTAAATGGAGAGACTCTCAAACTGGTG  
 GAGATAATAAAACCTACTTCACTTAGGCAGCTCTGCTCCTGGAAAGAGAAAAGTGAAA  
 CTGATAAGGAAACTCTTTGGTAAAGCAACACTTAGCAAACTTCAACCAAGGACAAAA  
 GGGAGGAGGCTCAGTGGACACCTACTAAATGTCTTCCAAAAATGTTTCAGGTGACAGAC  
 ATAAATGTAGGGAGGAAACTTTTAAACAAGAATCACAACTCCAGAAAAAAATTCAGGAC  
 ATTTCTACAAAGGAGAGACAGAGTGGCACAAGTGAGAGCAAGAGAAAGAAAGCTGAGG  
 AAATCTGAAAAGTCAGACTCCAAGGGAGGAGACAAGGAATCCTCCAAGTCATTAG  
 TGCACAAAGGAGCTTCACTATAGAAAAACCCAGCCAAACATACCCATAGAATTAATTC  
 CCCATATAAATAAACAGACTTCTCTACTCCTTCTTCTTAGCATTAACATCTGCAAGTA  
 GAATACGAGAAAGAGTGAGTCTTTGGAGTCTGATTCAGATGAGACCAACCTTTATTC  
 TAAAGACACAGAGACGATTAATGGCTTTCTAGAAGCTAAACTACGTGAAGATAATAAAAA  
 CTGATGAAGGACAGATACTCCAGTTATAATAGAGACAATTTCTATTTCCACAGAATCTG  
 ATGTAGATACAGCTAGTACAATCAGTCTGGTTACTGGAGAAACTGAAAGAAAGTCAACCC  
 AAAAGCAAGAGTTTCTACTAGCTCTATAAAGATAGGTGTCCACAGTTCTCTTCCA  
 AAGATGTTACAAAATCATCATCTTCAGGTGCTAGGG

**FIG. 17I**

BR-2 (a novel gene; 5' end; likely an alternatively spliced form of BR-1)

GGATGACGTAGCTTTGCCAAAGACTTAGAAGCTAAGCAGAAAAATGAGCTTAACATCCTGG  
TTTTTGGTGAGCAGTGGAGGCACTCGCCACAGGCTGCCACGAGAAAAATGATTTTTTGTGGGA  
AGAGATGACTGTGAGCTCATGTTGCAAGTCTCGTAGTGTGGATAAGCAACACGCTGTCATC  
AACTATGATGCGTCTACGGATGAGCATTAGTGAAGGATTTGGGCAGCCTCAATGGGACT  
TTTTGTAATGATGAAGGATTCGGAAACAGACTTATATCACCTTGAAACTTGAAGATAAG  
CTGAGATTTGGATATGATACAATCTTTTCACTGTAGTACAAGGAGAAAAATGAGGGTCCCT  
GAAGAAGCTCTTAAGCATGAGAAGTTTACCATTCACTTCAGTTGCTCCCAAAATCTTCA  
GAATCAGAATTATCCAAATCTGCAAGTGCCAAAAGCATAGATTCAAAGGTAGCAGACGCT  
GCTACTGAAGTGAGCACAAAACACTGAAGCACTGAAATCCGAGGAAAAAGCCATGGAT  
ATTTCTGCTATGCCCCGTGGTACTCCATTATATGGGCAGCCGTCAATGGTGGGGGATGAT  
GAGGTGGATGAAAAAAGAGCTTTCAAGACAATGGCAAACCTGAAAAAACCATGAA  
GCTGGAACATCAGGGTGACGATAGATGCCAAGCAAGTTGAGGAACAATCTGCAGCTGCA  
AATGAAGAAGTACTTTTTCTTTCTGTAGGGAACCAAGTATTTTGAATCCCTACAAAA  
GAATTCACGCAACCATCAAAAATAACAGAAAGCACTATTATGAAATCCCAACAAAAGAC  
ACGCCAAGTTCCTATATAACAGGTGCAGGGCATGCTTCATTTACCATTGAATTTGATGAC  
AGTACCCAGGGAAGGTAACATTAGAGACCATGTGACAAAGTTTACTTCTGATCAGCGC  
CACAAAGTCCAAGAAGTCTTCTCCTGGAACCTCAAGACTTGCTGGGGATTCAAAACAGGAATG  
ATGGCACCCGAAAAACAAAGTTGCTGACTGGCTAGCACAAAAACACCTCTCTCAATTGCTA  
TGGGAAGAAACAGAAAGAGGATTCTAAAAGCATTAAGAGTGATGTTCCAGTGACTTTGAAA  
AGGTTGAAAGGAAATAAATCATGATGATGGTACGCAAAAGTGATTGAGAGAACGCTGGGGCT  
CACAGGCGCTGTAGCAAAACGTGCAACTTTGAGGAACACTTAAGACGCCACCATTCAGAA  
CACAAAAGCTACAGAAAGGTCAGGCTACTGAAAAGCATCAAGACCAGCTGTTGTGTTT  
GGAGTAGATGACAATCAGGATTATAATAGGCGCTGTTATCAACGAAAAACATAAAGATCTA  
ATAAAGAGTTGGGCTCTCAGTTCTGCTGCAGCAGTAATGGAAGAAAGAAAAACCACTGACT  
ACATCTGGATTTCCACCACTCAGAGGAAGGCACATCTTCATCTGGAAGCAACGTTGGGTT  
TCACAGTGGGCTAGTTTGGCTGCCAATCATACAAGGCATGATCAAGAGAAAGGATAATG  
GAATTTTCTGCACCTCTTCTTATAGAGATGAGACAGAGATCAGTGAGTCTGGCATGACA  
GTGAGAAGTACTGGCTCTGCAACTTCCTTGGCTAGCCAGGGAGAGAGAAGGAGACGAACCT  
CTTCCCCAGCTTCCAATGAAGAAAAGTCTCTTGAGAGCCACAGAGCAAAAGGTTGTAACA  
CAGAGGTGAGAGATAGGAGAAAAACAAGACACAGAACTTCAGGAGAAAAACCACTACA  
CAGGATATCAGGAAGAATAAACAAGATGCTGACAGACCCTTGAGTAAAAAGAACAGGGCA  
GTAATGGAGAGACTCTAAAACCTGGTGGAGATAATAAAACCCCTACTTCACTTAGGCAGC  
TCTGCTCCTGAAAAAGAAAAAGTGAAACTGATAAGGAACTCTTTGGTAAAGCAAAACA  
TTAGCAAACTTCAACAACAAGAAACAAAGGGAGGAGGCTCAGTGGACACCTACTAAATTG  
TCTTCCAAAAATGTTTCAGGTGAGACAGATAAATGTAGGGAGGAACTTTTAAACAAGAA  
TCACAACCTTCAGAAAAAATTCAGGACATTTACAAGCAAAAGGAGACAGAGTGGCACA  
AGTGAGAGCAAGAGAAAAAGTCTGAGGAAATTTCTGAAAAGTCAGACTCCAAAGGGAGGA  
GACAAAGAAAGTCTCTCAAGTCATTAGTGCAGCAAGGGAGCTTCACTATGAAAAACCC  
AGCCAAACATACCCATAGAAGTATTCCCATATAAATAAACAGAGACTTCTCTACTCTCT  
TCTTCTTAGCATTAACATCTGCAAGTAGAATACGAGAAAAAGTGAGTCTTTGGATCCT  
GATTCTAGTATGGACAC

**FIG. 17J**

Gene AS (encodes a novel gene product; may be anti-sense of tyrosinase-replated protein-2)

AAAAGGAGGAGGCTTAATCAATATTGGGGGGGGGTTATTATTAGATATCACAAATTGTC  
AGGTCATCTTTTATTTGAAGGTAGAGGTAGCCTCAAGCACTTTAGTTGGGTTTGTAAAC  
AAGCAAGCAAGCGGAACTACAGCTAAGCATCTTTCTGAATGAGATCATCATCATATAG  
AAGAACCTTAGTCAAAAGATCTTCAACTCAAGAAGGAACAGTGAGGATTAGTTCTTTTAT  
GTCAGCGTCAGAAAGTGTGGCTTGGCCAGCCTCTTCTTAGGTAAGGCATGAGCACCCCTA  
GGCTCTTCTGTGTATCTCTTGCTGCTTAAATGTGTCTCATTAGGGGTGTATATCTCTTT  
TCGAAGTCTTCTATATTGAAGAAAAGCAACAGCACAAAAGACCACCAAGCCAGCCAGC  
TGTTCCTACTGACTAAGAGAGTTGTGGGCCAACCTGGAGTTTCTTCAACTGAAACTGG  
CAGATCGATGGCATAGCTGTAGCCAAGTTGGTCTGAGGTTAAAGAGAGTTCTTCATTAGT  
CACTGGAGGGAAGAAAGGAACCATGTTGTACATCCGATTGTGACCAATAGGGGCGAGCTC  
CTGAGGCCAGGCATCTGAGGAGGATTAAATCTTTTCTCCTCACTCATCAAGATGGCATC  
AGTAAAGGAATGAAGAACCAAAAATGGGATCATTGGCGGCTGAATGTGGCAAGCGTT  
TGTCCCGTTTCAGGAAGGAATGAACCAAAATTAAGAGGCTCATCACTTGAGAATCCAGAT  
CCCATCTGCTTTATCAAAACCCTTCAAAAGCATTCCTGAAACTGAAGGTAGAGTTCTGGAA  
GAAGGGAGGATTTGCAAACTCTGAGAGACAGGCAATCTCGTATGTCCTTTAAAGGTTGG  
CAATTTCACTGCTTTCTTCCCATTTGATTCTCTCAGCAAACTTCATAGGTTCCATT  
GCACAAGGTGACCAAGTGGTTGTAGTCATCCAAGTATCACAGACAGTTTCCCAAGCTGGA  
GAACTCTGGATTCCGACTAATCAGAGTCGGATCGTCTGGTCTCGCTGCCCAAAAGCTGT  
GTCTGTACACACATACACTCGTTCTCTCCAGTGGCAAGTTCAGTAGGGCAAGGAAA  
AGACTTATCCCAATGAGTCGCTGGAGATCTCTTTCAGACACAACAAGTGTCACGCTG  
CCAGGTAAACAAATGCAGGTCCTTGATGTGAGAAATCTATGGCCCTGTAGGGCGCTCTGG  
TCCTAAATAATGTATCTCTAACAGAAATAATAATGAGGCCACACAAAATAATCAAACTAT  
CGAGTTGGCAAACTCGCGCTGGGTTCATTGGGCCAAGCAGGCCAGCCAGTGTATGTGT  
GGTGATCAGCTAGTCGGGTGTACTCTCTCTCGCGAGATCAAGGCGCCCAAGAACTCT  
CTCTCTTCTGAGGACTCAAGGAATGGATGTTCTGCCGAATCACTGGTGGTTCTCTCGC  
CTCGAGTTGGGACCGGTCAAGCAAACTGCACTCTCCACAATTAAGCCGGCAAGGTT  
TCCTGTGCATCTGCAGGTCGGTGGAAAGAAATTTCTTGCCACAGCTACCGTGCATCTGT  
GTTTCGTAGGATGTAGGACCACCTCCAGGCGCTTGTGTGGCTCGACCTCTGTGCAGCT  
CCCCCGGCTTGTGAGAGCCACAGACATTTGGCCGACTCTGCACCAGGCTGGGACGAC  
CTCCTTGTTCATAGGCTGTCCACCGTCATGCAGACTCGGGGGAAGTGAACCTGGGCTCT  
TGGCAGGATTTTCAGGCCAAGCAACTGAGCAGAAACCCCAACAAAGGGGCTCATGGC  
TTTATAATTGGGAGAGCTCTCTCTCTTACTTCTTCTGTCTGTCTGACTTTTCTCT  
CTTATCTTCTACTCTTTCAGTCTTTCTTTTTCAGTATTTTTATTTTTTCTTTCTCTA  
TTCTCTTCTCTTAAAAAATACCCACAAGAAATCACAGAGGTTACATGTGTGCACGGTTA  
CATGTGTGCACATGTGTACATGAACGTGCACACACAAATTTATGTATTCAACAACTAA  
CAGACTTAATTTCTTGAAGCGCTCTTAACAACCAAAATTTAATGAGGTTAGCGCTCTCT  
ACCATCTTCCCCGTTAAGTCAGGCTTGTCTAATTGAGTTAATTTACAGAGCACCCAGT  
CATACTACTTATTATGCTGGTATTTCTAAACCCTCTCCCTCCCTCCTTAGCTCTTGACT  
TAATCTCGTGGCGAATTCGGCAGCAGAAATTTGTTAAACAGAAATCAGAGGACCATCGGT  
GTCAATACCTCTCTACAAACTGCATTATTAAAGAGTTGAGGAGCTCTGGGCACAGAC  
AAGCCAGGAGATGGATAAAATGTTAAAAATCAAGCAACTCTGCTACTCTGAAAAGGA  
TAATGATGATGACCAAGTGACAAGGGTACTTATACATTGAGTTAGAGAAATCCCAACAG  
TGAGGAAGTGGAAAGCAAGAAAAATGATTGACAAGGTGTTGGAGTAGATGACAACTCAGGA  
TTATAATAGGCCTGTTATCAACGAAAAACATAAAGATCTAAATAAAGATTGGGCTCTCAG  
TTCTGCTGCAGCAGTAATGGAAGAAAGAAAAACCACTGACTACATCTGGATTTCCACCTC  
AGAGGAAGGCACATCTTCTGGAAGCAAACTAGGTTTTCACAGTGGGCTAGTTTGGC  
TGCCAACTCAAGGCATGATCAAGAAGAAAGGATAATGGAATTTCTCAGGCTCTTCTCC  
TTTAGAGAAATGAGACAGAGATCAGTGAGTCTGGCATGACAGTGAGAAGTACTGGCTCTGC  
AACTTCTCTAGTGGCTAGCCAGGGAGAGAGAAGGACGCAACTTCTCCAGCTTCCAAATGA  
AGAAAAGTCTCTTGAAGCCACAGAGCAAAAGTTGTAACACAGAGGTGAGAGATAGGAGA  
AAAACAGACACAGAACTTCAGGAGAAAGAAACACCTACACAGGTATACAGAGAAATGA  
ACAAGATGCTGACAGACCTTGTAGTAAATGAACAGGGCAGTAAATGGAGAGACTCTCAA  
AAGTGGTGAGATAATAAAACCTCTACTTCACTTAGCGAGCTGTCTCTGGAAAAGAGAA  
AAGTGAAGTGAAGGAACTCTTTGGTAAAGCAAACTAGCAAACTCTCAACAACA  
AGAACAAAGGAGGAGGCTCAGTGACACCTTCAATAATGTCTTCCAAAAGTGTTCAGG  
TCAGACAGATTAATGTAGGAGGAACTTTTAAACAAGAAATCACAACTCCAGAGAAA  
TTACAGCACTTCTCAAGCAAGGAGACAGAGTGGCAAAAGTGAGAGCAAGAGAA  
AGCTGAGGAAATTTCTGAAAGTCAAGCTCAAAGGAGGAGACAGAAAGAAATCTCCCAA  
GTCTATTAGTGACAAAGGAGCTTCACTATAGCAAAACGACCCCAACATACCTCAGA  
ACTTATCCCCATATAATAACAGACTCTCTCTACTCTCTCTTTAGCATTAACATC  
TGAAGTAGAATACGAG

**FIG. 17K**